poorly appreciated the professional performance of pharmacists. Therefore, raising the awareness about the important role of pharmacist in providing public health is warranted.

PHS119

PROFILE OF PATIENTS USING IMMUNOBIOLOGICAL IN A HEALTH PLAN OPERATOR, FORTALEZA, BRAZIL: ECONOMIC AND PHARMATHERAPEUTICS INDICATORS

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OBJECTIVES: To profile the use of an operator in immunobiological supplemental health Fortaleza - Brazil, to identify the most prescribed therapeutic regimens and costs. **METHODS:** Cross-sectional study in two hospitals accredited service provider, from March to November/2012. Data were recorded by medical expertise in computerized management system (Sabius®) performed after the medical consultation. Later, these were entered in Microsoft Excell 2007 and analyzed by pharmacists auditors. The cost was calculated from the value contained in Brasíndice Unit 765, using the Consumer Price Max. The doses used for rheumatoid arthritis Etanercept 50 mg, 40 mg Adalimumab, abatacept 750 mg, 300 mg infliximab, 560 mg Tocilizimabe, Rituximab 1g and Golimumab 50 mg based on a 70 kg adult. **RESULTS:** We analyzed 64 patients with a mean weight 67 kg, of which 70.31% (n = 45) were women aged 30-59 years whose most frequent indications were rheumatoid arthritis (n = 33, 51.56%) and ankylosing spondylitis (n = 19; 29.69%). The most immunobiological commonly prescribed were Infliximab (n = 36; 56.25%), Tocilizimabe (n = 11, 17.19%), abatacept, and Rituximab (n = 8; 12, 50%) and golimumab (n = 1, 1.56%). It was observed that 67% (n = 43) patients were naïve immunobiological and 33% (n = 21) initiated with anti-TNF, whereas 61.9% (n = 13) moved into one another with immunobiological mechanism of action and 38.1% (n = 8) continued with an anti-TNF, changing only the drug. The average cost of treatment/dose first line was R$ 6,068.91 and the second line was R$ 9,590.06, resulting in an incremental cost/dose of R$ 3,521.16 (36.72%). **CONCLUSIONS:** Knowledge of costs and pharmacotherapeutic profile becomes important for planning strategies aimed at streamlining and optimization of these drugs on quality of care.

PHS120

MEDICAL RE-ADMISSIONS AT THE ROYAL LONDON HOSPITAL – PATIENT SPECIFIC AND DISEASE SPECIFIC FACTORS AT ONE WEEK AND ONE MONTH

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OBJECTIVES: The Royal London Hospital is a teaching hospital in East London, UK. We hypothesised that medical patients with multiple co-morbidities and complex disease are likely to present with a new diagnosis when re-admitted within a month. Further, re-admission within a week is likely to be related to the initial diagnosis. **METHODS:** We conducted a retrospective audit of all non-elective adult acute medical admissions over a 6 week period during 2012. We collected information on patient demographics, ICD-10 diagnosis, length of hospital stay, along with readmissions within one week and one month. We reviewed the original and subsequent electronic discharge summaries. We highlight patient specific and disease specific factors. **RESULTS:** There were a total of 124 readmissions from the original audit (n=859). A large proportion (40%) of all readmissions were in the elderly (over the age of 70). There were 73 (59%) readmissions within 1 month, and 37 (30%) within a week. Fourteen patients (11%) were readmitted within a week, and again within a month. COPD (33%), PE (29%), sepsis (26%) and cellulitis (24%) had the highest re-admission rates. Our audit points to a 14.4% readmission rate in our cohort. We aim to address the precipitating factors in our new physician led ambulatory care clinic. We highlight the bed days saved through such a clinic. **CONCLUSIONS:** Contrary to our hypothesis readmissions within a month were related to the original diagnosis, interestingly this was less so when re-admitted within a week. Our audit has helped highlight the need for better community management plans prior to discharge. This has led to closer links with the Community Rehabilitation and Support Team (CReST) in order to reduce readmission rates.

PHS121

DO PATIENTS NEED TO BE ACCOMPANIED IN ICU WARDS?

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OBJECTIVES: For treatment needs, accompany is limited for ICU patients. A 30-minute visit a day is allowed for their families. However, mental disturbance have been reported in ICUs. Actually, patients suffer from not only diseases but also loneliness in the units. The study was conducted to answer the question whether ICU patients need to be accompanied? **METHODS:** A questionnaire survey consisting of 3 questions about the attitude to accompanies in ICU was conducted in General Hospital of Shenyang Military Area in China. The 3 questions are: 1) Do you need an accompanier when treated in ICU? (Yes/No); 2) If you need, who will be the candidate? (A family member/A paid nursing staff/A relative or friend/Anyone available); 3) How long do you need to stay with your family members each day in ICU? (Half an hour/One hour/Half a day/All day). After repeatability test, the questionnaire was filled by patients randomly selected in ICU wards of cardiology and general medical wards from January 1, to August 31, 2011. Chi-square tests were used to compare the choices between patients from different wards, of different gender and age. **RESULTS:** Repeatabilities for the 3 questions were 0.742, 0.783, and 0.785. Totally, 142 patients were involved in, including 69 ICU patients and 73 general patients, 117 males and 25 females, 53 young & middle aged (≤60)and 89 old ones (>60). Fifty-seven percent of the patients needed accompaniers in ICU, 86.6% of the patients chose family members as the candidates, 74.6% of the patients needed all-day accompanies by family members. Percentages of patients needing half-day and all-day accompany by family members were higher in ICU and old patients than those in general and younger ones($P<0.05$). **CONCLUSIONS:** Patients do need to be accompanied in ICU. An all-day accompany by family member is highly preferred.

PHS122

PIT FALLS OF THE NATIONAL HEALTH SERVICE (NHS) "INTERNAL MARKET" HEALTH CARE MODEL; DOES REIMBURSEMENT OF SECONDARY CARE MATCH COSTS INCURRED

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OBJECTIVES: Many NHS hospitals have developed an Acute Medicine Unit to streamline all non-elective medical admissions. The cost of providing this secondary care service is funded by the local primary care team, who in turn receive funding from central government. However, teaching hospitals in the capitol would also care for a considerable number of international and national patients. We sought to examine if health care costs were reimbursed for these patients. **METHODS:** We undertook a retrospective audit of all admissions over a 6 week period at a central London teaching hospital. We collected patient demographics, ICD-10 diagnosis and length of stay. We identified all "out of area" patients and calculated costs incurred based on bed days, diagnosis and re-admission within a month. The ICD-10 codes were converted to cost (HRG) codes through the finance office. **RESULTS:** A total of 864 admissions and 124 readmissions were analysed. In all 28% (n=242) of admissions were "out of area". This cohort accounted for 25% of bed occupancy, and cost the hospital £390,300. Further, 1% (n=8) of patients were of no fixed abode (homeless) and cost £7,200 in bed occupancy. The international patients account for 1% (n=6) and cost £4,500 in bed occupancy. The top 3 presenting complaints with disease management costs were; Sickle cell anaemia (n=27-£34,899) chest pain (n=24-£16,757) and lower respiratory tract infection (n=19-£69,288). We went on to compare the income generated from these admissions on an individual basis. Initial analysis point to a deficit in income generated. This has significant implications for the financial viability of secondary/tertiary care hospitals in the NHS. **CONCLUSIONS:** Our analysis point to a considerable financial burden from "out of area" patients to the capitol's hospitals. Reducing this financial burden does raise clinical and ethical challenges to the receiving hospital.

PHS123

THE EFFECT OF COPAYMENTS FOR PRESCRIPTIONS ON ADHERENCE TO MEDICINES IN PUBLICLY INSURED POPULATIONS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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OBJECTIVES: To quantitatively estimate the effect of copayments for prescriptions on adherence to medicines in a publicly insured population. **METHODS:** Eight electronic databases and the grey literature were systematically searched by one reviewer for relevant articles, along with hand searches of references in review articles and the included studies. Studies were included if they involved a publicly insured population, an intervention which was the introduction of, or an increase in copayment and if the outcome was objectively measured adherence (or non-adherence) to medicines. Measures of adherence included Proportion of Days Covered and Medication Possession Ratio. Study exclusion, data extraction and quality appraisal were carried out by two independent reviewers. A random effects model was used to generate the meta-analysis in RevMan version 5.1. Statistical heterogeneity was assessed using the I^2 test; p=>0.1 indicated a lack of heterogeneity. **RESULTS:** Seven out of 41 studies met the inclusion criteria. Five studies contributed more than 1 result to the meta-analysis. The meta-analysis included 199, 996 people overall; 74, 236 people in the copayment group and 125,760 people in the non-copayment group. Average age was 71.75 years. In the copayment group, (verses the non-copayment group), the odds ratio for non-adherence was 1.11 (95% CI 1.09-1.14; P=<0.00001). An acceptable level of heterogeneity at I^2=10%, (p=0.34) was observed. **CONCLUSIONS:** This meta-analysis showed an 11% increased odds of non-adherence to medicines in publicly insured populations involved in a system where copayments for medicines are necessary. Policy-makers should be wary of potential negative clinical outcomes resulting from lack of adherence. Unintended economic repercussions of copayments are possible.

PHS124

REIMBURSEMENT LANDSCAPE AND POLICY DEVELOPMENT FOR RARE DISEASES IN CHINA: A CASE STUDY OF HEMOPHILIA

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OBJECTIVES: Hemophilia, a costly yet treatable rare disease, receives 100% reimbursement coverage in most developed world and some developing countries. The Chinese Ministry of Health announced in 2012 that 20 high-cost diseases (including hemophilia) should be prioritized to ease patients' economic burdens. This study aims to understand the current reimbursement landscape for hemophilia in China and to explore potential funding mechanisms that could be expanded across China to improve reimbursement coverage to meet this requirement. **METHODS:** Hemophilia reimbursement policies of 3 major social insurance schemes were collected in 36 cities (provincial capitals and municipalities). In-depth interviews were conducted with selected government stakeholders to understand the rationale of different policies in different cities

and implementation results. **RESULTS:** Outpatient hemophilia treatment is covered by health insurance schemes in more than 80% of the selected cities, yet with reimbursement caps and patient co-pay requirements. While there is significant variation by city, the average co-pay requirement is more than 50% and annual reimbursement is usually capped below USD16k (100k CNY). However, some cities have pioneered innovative policies to provide better coverage for hemophilia patients: Guangzhou health insurance bureau has decreased hemophilia co-payments to less than 10% after their extensive review of the economics of hemophilia treatment. The local health insurance bureau in Qingdao has decided to joint-fund prophylaxis treatment for pediatric patients together with a FVIII manufacturer. **CONCLUSIONS:** Hemophilia treatment reimbursement in China is still at a low level overall despite a few pioneer cities which have identified unique approaches to reducing the economic burden of patients living with hemophilia. There is significant room to increase reimbursement ratio and cap to reduce patients' economic burden, and meanwhile we expect tailored public-private partnerships to be a promising supplementing solution.

PHS125

MULTI-PAYERS COMPARISON OF DAILY REIMBURSEMENT VALUES OF DISTINCT HOSPITAL FACILITIES IN THE BRAZILIAN PRIVATE HEALTH SYSTEM

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OBJECTIVES: In the Brazilian public health care system, the government establishes one value to reimburse the entire country for the use of different health care facilities. In the supplementary/private system, as a business-to-business negotiation, each the hospital negotiates different reimbursement values with each payer for the use of distinct hospital facilities. There are eight different types of hospital facilities available in the supplementary system: standard, cardiovascular unit, surgery unit, psychiatric, day hospital, nursery, adult and pediatric ICU. The objective of this study is to find out and compare hospital facilities daily reimbursement values and establish a mean reimbursement value for each facility type in the private health care. **METHODS:** Data was obtained from BI.2iM database, a 5 million people sample of the Brazilian supplementary health care market. All values are in 2009 Brazilian reais (US$1.00 = R$ 2.00). Data are presented as mean±standard deviation **RESULTS:** 65% of the patients are from medical cooperatives, HMOs 20%, self-management 11%, others 4%. A total of 303,573 hospitalizations were reviewed with a total expenditure of R$ 82.9 million. The mean reimbursement for each facility type was: standard R$ 152.43±R$ 148.80; cardiovascular unit R$ 183.03±R$ 92.63; surgery unit R$ 202.06±R$ 87.74; psychiatric R$ 121.42±R$ 50.66; day hospital R$ 79.60±R$ 23.50; nursery R$ 73.25±R$ 30.67; adult ICU R$ 625.82±R$ 305.71 and pediatric ICU R$ 762.91±R$ 330.58. **CONCLUSIONS:** There is not a single reimbursement list (health plans to the providers) or fixed values for hospital facilities daily reimbursement values. We found different mean values of hospital facilities daily reimbursement that vary according to the facility type. Even within the same facility type there is also reimbursement value variation.

PHS126

FACTORS INFLUENCING THE VARIATION IN HOSPITAL INPATIENT PRICES BETWEEN PUBLIC AND PRIVATE PAYERS

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OBJECTIVES: The large variation in payments hospitals receive for similar services has captured the attention of payers and policy-makers looking for ways to curb excess health care spending. There is little empirical evidence regarding the specific role that patient, population, and market factors might have in driving price variation across small geographic areas and how these factors vary by payer. The purposes of this study are: (1) to provide insight into the relationship between patient, population, and market factors and payer-specific prices for several common conditions, and (2) to examine the factors that influence differences in the inpatient price per discharge between public (Medicare) and private payers among different hospital services. **METHODS:** We extracted hospital data from six states where a Healthcare Cost and Utilization Project (HCUP) price-to-charge ratio (PCR) was available from the 2006 State Inpatient Databases (SID). Even in states with PCR data, the PCR was not available for Kaiser Permanente hospitals so those discharges were excluded. The price per discharge was measured at the county-level for all discharges, an acute condition (acute myocardial infarction), and an elective condition (knee arthroplasty). Payer-specific inpatient prices were estimated by applying the HCUP PCR to total hospital charges. Ordinary least squares regression models were used to identify factors significantly associated with inpatient price per discharge by payer. **RESULTS:** Hospitals charged significantly higher prices to private payers compared to public payers. There was more variation in price per discharge for private payers compared to public payers for most hospital services. Specific market factors, including hospital competition, were associated with the price variation between payers. **CONCLUSIONS:** The larger variation in the price per discharge identified among private payers necessitates further exploration. It may stem from differences in negotiated prices and market power across small geographic areas, or the price restraints of public payers.

PHS127

IN VITRO FERTILIZATION (IVF): GLOBAL TRENDS IN MARKET DYNAMICS AND REIMBURSEMENT POLICIES

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OBJECTIVES: To understand IVF policy landscape, reimbursement and access to treatment in the global health markets, and trends and drivers of change, for the purpose of identifying markets likely to support reproductive health franchises. **METHODS:** IVF ecosystems were assessed in 19 countries. We conducted a thorough review of published literature pertaining to Assisted Reproductive Technology (ART) policy, reviewed infertility organization and clinic websites and associated publications. Key market differences impacting the IVF environment were identified and analyzed for comparison. **RESULTS:** Opportunities in IVF must consider reimbursement policy, cultural influences, and med-tourism. While the US is one of the most advanced markets with respect to number of IVF cycles, technologies utilized, and cultural trends, healthplans provide no reimbursement and most patients pay 100% out-of-pocket (OOP). Elsewhere, reimbursement varies greatly: Israel and European countries tend to provide more generous reimbursement than Latin America and Africa, however restrictions and requirements can greatly limit the coverage. Recent legislation changes in European markets have expanded reimbursement, and changes in South America are likely to evolve as reproductive health awareness and access to infertility treatment becomes more widespread. Finally, many patients do seek treatment abroad due to lower costs, shorter waitlists, and fewer restrictions: South America, South Africa, and Israel tend to be sought after destinations for patients willing to pay OOP. **CONCLUSIONS:** Reproductive health is unlike other therapeutic areas because reimbursement, alone, is insufficient to assess opportunity. Given the breadth of this poorly reimbursed therapeutic area, stakeholders must seek to appreciate the impact of cultural trends and med-tourism, including: declining birth rates, increasing access to IVF and reproductive health awareness, improvements in local economies and reforms to public policy. Manufacturers and policy makers should prepare to understand evolving market access and patient environments to effectively prioritize traditionally overlooked countries as key factors shift in the coming years.

PHS128

IMPLEMENTATION OF QUALITY IMPROVEMENT INTERVENTIONS FOR PRESSURE ULCER PREVENTION IN UNIVERSITY HEALTHSYSTEM CONSORTIUM HOSPITALS

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OBJECTIVES: Quantify adoption patterns of quality improvement (QI) interventions designed to support evidence-based guidelines for hospital-acquired pressure ulcer (HAPU) prevention. **METHODS:** We surveyed wound care nurses at 180 University HealthSystem Consortium (UHC) hospitals to determine which QI interventions were included in HAPU prevention protocols. The validated questionnaire organized 29 HAPU-specific QI interventions into four domains: Leadership; Staff; Information Technology (IT); and Performance & Improvement (P&I). Respondents checked QI interventions implemented anytime between 2007-2012. Descriptive statistics evaluated patterns of QI adoption and t-tests established statistically significant (p>0.05) increases in adoption. The points of time evaluated for QI adoption were 3rd-quarter, 2008 when changes to Medicare policy discontinued HAPU reimbursement, and 2nd-quarter, 2012. Increases were described in terms of scope (number of QI domains employed) and scale (number of QI interventions within domains). **RESULTS:** Fifty-five (30.6%) hospitals responded to the survey. Fifty-three (96%) hospitals implemented QI with HAPU prevention. Leadership interventions were most frequent, increasing in scope from 40-63% between 2008-2012; scale increased significantly for all leadership interventions, with "annual programs to promote pressure ulcer prevention" showing the greatest increase. Staff interventions increased in scope from 32-53%; signficant increases in scale occurred for six-of-seven interventions, with "frequent consult driven huddles" undergoing the greatest increase. IT interventions increased in scope from 31-55%, and all five IT interventions increased significantly. Establishing an electronic HAPU trigger/alarm for high-risk patients accounted for the greatest adoption. P&I interventions increased in scope from 18-40%. Seven-of-nine P&I interventions had significant increases in scale, with "new skin care products…" increasing the most. **CONCLUSIONS:** UHC hospitals increased adoption of QI interventions, including scope and scale of QI strategies, since changes in Medicare policy to support HAPU prevention protocols and make use of novel technology and medical products. The next step in this research is to compare the effectiveness of different QI interventions.

PHS129

THE RELATIONSHIP BETWEEN LOCAL FAMILY PHYSICIAN SUPPLY AND POPULATION HEALTH STATUS IN THE FEDERAL REGIONS IN THE UNITED STATES

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OBJECTIVES: Due to emerging health care crisis of nationwide sharp decline in family physician (FP) supply, this study investigates the relationship between the supply of local FP workforce and the general population health status in the US federal regions. **METHODS:** A cross-sectional study was performed by merging the individual-level data from the 2009 Behavioral Risk Factor Surveillance System (BRFSS) with the county-level data from the 2011-2012 Area Resource File